RAW SEQUENCE LISTING　　　　　　　　　DATE: 07/27/2001
PATENT APPLICATION:　US/09/538,038　　　TIME: 11:28:36

Input Set : D:\SEQLIST1878-4051US.txt
Output Set: N:\CRF3\07272001\I538038.raw

```
 3 <110> APPLICANT: Beasley, James
 4         Blume, Arthur J.
 5         Schaffer, Lauge
 6         Pillutla, Renuka
 7         Brandt, Jakob
 8         Brissette, Renee
 9         Spetzler, Jane
10         Cheng, Weiqing
11         Ostergaard, Soren
12         Mandecki, Wlodek S.
13         Hansen, Per Hertz
14         Ravera, Mark
15         Hsiao, Ku-chuan
17 <120> TITLE OF INVENTION: INSULIN AND IGF-1 RECEPTOR AGONISTS AND ANTAGONISTS
19 <130> FILE REFERENCE: 1878-4051
21 <140> CURRENT APPLICATION NUMBER: 09/538,038
22 <141> CURRENT FILING DATE: 2000-03-29
24 <160> NUMBER OF SEQ ID NOS: 2653
26 <170> SOFTWARE: PatentIn Ver. 2.1
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 40
30 <212> TYPE: PRT
31 <213> ORGANISM: Artificial Sequence
33 <220> FEATURE:
34 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
35       peptide
37 <400> SEQUENCE: 1
38 Ile Arg Asp Met His Tyr Val Trp Val Gln Asp Arg Asp Arg Tyr Ile
39   1           5              10               15
41 Asn Gly Val Arg Gln Trp Tyr Ile Ser Asp Arg Tyr Asn Pro Gly Ser
42          20               25               30
44 Ala Phe Tyr Arg Trp Phe Ile Asp
45        35              40
48 <210> SEQ ID NO: 2
49 <211> LENGTH: 40
50 <212> TYPE: PRT
51 <213> ORGANISM: Artificial Sequence
53 <220> FEATURE:
54 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
55       peptide
57 <400> SEQUENCE: 2
58 Arg Met Gly Leu Gln Ala Leu Ala His Tyr Arg Lys Ser Ala Gly Pro
59   1           5              10               15
61 Ile Phe Leu Ser Ser Gly Ser Val Ile Lys Gly Ser Glu Gly Asp Pro
62          20               25               30
64 Phe Tyr Ala Trp Phe Arg Leu Gln
65        35              40
```

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68 <210> SEQ ID NO: 3
69 <211> LENGTH: 40
70 <212> TYPE: PRT
71 <213> ORGANISM: Artificial Sequence
73 <220> FEATURE:
74 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
75       peptide
77 <400> SEQUENCE: 3
78 Met Pro Val Ser Leu Phe Arg Arg Val Trp Asp Tyr Arg Asp Gly Glu
79  1               5                   10                  15
81 His Glu Thr Leu Glu Ser His Tyr Val Val Pro Gln Ala Ala Leu Asp
82              20                  25                  30
84 Arg Leu Phe Tyr Ser Trp Phe Ser
85          35                  40
88 <210> SEQ ID NO: 4
89 <211> LENGTH: 40
90 <212> TYPE: PRT
91 <213> ORGANISM: Artificial Sequence
93 <220> FEATURE:
94 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
95       peptide
97 <400> SEQUENCE: 4
98 Pro Leu Tyr Gly Gly Gly Ile His Leu Tyr Tyr Pro Gly Thr Met Gly
99  1               5                   10                  15
101 Tyr Val Pro Gly Phe Pro Arg Gln Val Lys Val Leu Gly Asp Ala Asp
102              20                  25                  30
104 Lys Asn Phe Tyr Asp Trp Phe Met
105          35                  40
108 <210> SEQ ID NO: 5
109 <211> LENGTH: 39
110 <212> TYPE: PRT
111 <213> ORGANISM: Artificial Sequence
113 <220> FEATURE:
114 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
115       peptide
117 <400> SEQUENCE: 5
118 Tyr Arg Gly Met Leu Val Leu Gly Arg Ile Ser Asp Gly Ala Gly Lys
119  1               5                   10                  15
121 Val Ala Ser Glu Pro Pro Ala Arg Ile Gly Gln Lys Val Phe Ala Val
122              20                  25                  30
124 Asn Phe Tyr Asp Trp Phe Val
125          35
128 <210> SEQ ID NO: 6
129 <211> LENGTH: 39
130 <212> TYPE: PRT
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
135       peptide
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137 <400> SEQUENCE: 6
138 Ser Gly Cys Cys Arg Leu Leu Gly Leu Arg Trp Met Phe Ile Val Ile
139   1   5   10   15
141 Val Gly Trp Ser Gly Ala Leu Val Cys Gln Ser Ala Ala Ser Ala Ala
142   20   25   30
144 Gly Phe Tyr Asp Trp Phe Val
145   35
148 <210> SEQ ID NO: 7
149 <211> LENGTH: 21
150 <212> TYPE: PRT
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
155   peptide
157 <400> SEQUENCE: 7
158 Ile Gly Gly Gln Gly Gln His Gln Asp Gly Asn Phe Tyr Asp Trp Phe
159   1   5   10   15
161 Val Glu Ala Leu Ala
162   20
165 <210> SEQ ID NO: 8
166 <211> LENGTH: 20
167 <212> TYPE: PRT
168 <213> ORGANISM: Artificial Sequence
170 <220> FEATURE:
171 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
172   peptide .
174 <400> SEQUENCE: 8
175 Val Phe Trp Asn Cys Arg Ser Gln Gln Leu Asp Phe Tyr Glu Trp Phe
176   1   5   10   15
178 Glu Gln Ala Ala
179   20
182 <210> SEQ ID NO: 9
183 <211> LENGTH: 26
184 <212> TYPE: PRT
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
189   peptide
191 <400> SEQUENCE: 9
192 Arg Val Ala Gly Ala Ile Ser Ala Pro Gly Leu Val Ser Asn Lys Gln
193   1   5   10   15
195 Asp Gly Leu Phe Tyr Ser Trp Phe Arg Glu
196   20   25
199 <210> SEQ ID NO: 10
200 <211> LENGTH: 20
201 <212> TYPE: PRT
202 <213> ORGANISM: Artificial Sequence
204 <220> FEATURE:
205 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic

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```
206       peptide
208 <400> SEQUENCE: 10
209 Val Leu Gln Ala Arg His Gly Cys Asp Ser Val Ser Asp Cys Phe Tyr
210   1               5                   10                  15
212 Glu Trp Phe Ala
213              20
216 <210> SEQ ID NO: 11
217 <211> LENGTH: 20
218 <212> TYPE: PRT
219 <213> ORGANISM: Artificial Sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
223       peptide
225 <400> SEQUENCE: 11
226 Gly Ala Phe Tyr Arg Trp Phe His Glu Ala Leu Val Gly Ser Glu Arg
227   1               5                   10                  15
229 Val Pro Asp Val
230              20
233 <210> SEQ ID NO: 12
234 <211> LENGTH: 20
235 <212> TYPE: PRT
236 <213> ORGANISM: Artificial Sequence
238 <220> FEATURE:
239 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
240       peptide
242 <400> SEQUENCE: 12
243 His Glu Ala Phe Tyr Asp Trp Phe Ser Ala Leu Val Asp Gly Gly Tyr
244   1               5                   10                  15
246 Glu Leu Met Gly
247              20
250 <210> SEQ ID NO: 13
251 <211> LENGTH: 20
252 <212> TYPE: PRT
253 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
257       peptide
259 <400> SEQUENCE: 13
260 Arg Ile Gly Gly Gly Trp Ala Arg Ser Glu Gly Phe Tyr Glu Trp Phe
261   1               5                   10                  15
263 Val Arg Glu Leu
264              20
267 <210> SEQ ID NO: 14
268 <211> LENGTH: 20
269 <212> TYPE: PRT
270 <213> ORGANISM: Artificial Sequence
272 <220> FEATURE:
273 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
274       peptide
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         Input Set : D:\SEQLIST1878-4051US.txt
         Output Set: N:\CRF3\07272001\I538038.raw

276 <220> FEATURE:
277 <223> OTHER INFORMATION: Xaa represents a variable or unknown amino acid
279 <400> SEQUENCE: 14
280 Leu Pro Ala Gly Gly Ala Xaa Gly Phe Ala Xaa Arg Gly Phe Tyr Glu
281   1   5   10   15
283 Trp Phe Glu Ser
284   20
287 <210> SEQ ID NO: 15
288 <211> LENGTH: 20
289 <212> TYPE: PRT
290 <213> ORGANISM: Artificial Sequence
292 <220> FEATURE:
293 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
294   peptide
296 <400> SEQUENCE: 15
297 Gly His Ser Trp Ala Leu Val Arg His Val Asp Arg Leu Phe Tyr Glu
298   1   5   10   15
300 Trp Phe Asp Leu
301   20
304 <210> SEQ ID NO: 16
305 <211> LENGTH: 20
306 <212> TYPE: PRT
307 <213> ORGANISM: Artificial Sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
311   peptide
313 <400> SEQUENCE: 16
314 Leu Gly Thr Ser Ala Gly Gln Gly Val Gly His Arg Ala Phe Tyr Gln
315   1   5   10   15
317 Trp Phe Gln Ser
318   20
321 <210> SEQ ID NO: 17
322 <211> LENGTH: 20
323 <212> TYPE: PRT
324 <213> ORGANISM: Artificial Sequence
326 <220> FEATURE:
327 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
328   peptide
330 <400> SEQUENCE: 17
331 Arg Gly Gly Gly Thr Phe Tyr Glu Trp Phe Glu Ser Ala Leu Arg Lys
332   1   5   10   15
334 His Gly Ala Gly
335   20
338 <210> SEQ ID NO: 18
339 <211> LENGTH: 20
340 <212> TYPE: PRT
341 <213> ORGANISM: Artificial Sequence
343 <220> FEATURE:
344 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220> to
<223> fields of each sequence which presents at least one n or Xaa.

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Input Set : D:\SEQLIST1878-4051US.txt
Output Set: N:\CRF3\07272001\I538038.raw

```
L:280 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:14
L:280 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:14
L:280 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:620 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:34
L:620 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:34
L:620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34
L:623 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:34
L:623 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:34
L:623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34
L:2034 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:117
L:2034 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:117
L:2034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117
L:3847 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:215
L:3847 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:215
L:3847 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:215
L:4410 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:243
L:4410 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:243
L:4410 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:243
L:5013 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:285
L:5013 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:285
L:5013 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:285
L:5296 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:305
L:5296 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:305
L:5296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:305
L:5831 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:343
L:5831 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:343
L:5831 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:343
L:5834 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:343
L:5834 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:343
L:5834 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:343
L:7959 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:468
L:7959 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:468
L:7959 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:468
L:7962 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:468
L:7962 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:468
L:7962 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:468
L:7999 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:470
L:7999 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:470
L:7999 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:470
L:9903 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:582
L:9903 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:582
L:9903 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:582
L:12256 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:719
L:12256 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:719
L:12256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:719
L:12843 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:753
L:12843 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:753
L:12843 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:753
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Input Set : D:\SEQLIST1878-4051US.txt
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```
L:12846 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:753
L:12846 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:753
L:12846 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:753
L:12886 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:755
L:12886 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:755
L:12886 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:755
L:12952 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:758
L:12952 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:758
L:12952 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:758
L:13012 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:761
L:13012 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:761
L:13012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:761
L:13058 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:763
L:13058 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:763
L:13058 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:763
L:13098 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:765
L:13098 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:765
L:13098 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:765
L:13161 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:768
L:13161 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:768
L:13161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:768
L:13184 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:769
L:13184 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:769
L:13184 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:769
L:13267 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:773
L:13267 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:773
L:13267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:773
L:13327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:776
L:13356 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:777
L:13373 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:778
L:13376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:778
L:13379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:778
L:13396 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:779
L:13622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:790
L:13645 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:791
L:13708 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:794
L:13771 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:797
L:13851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:801
L:13854 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:801
L:14313 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:828
L:14911 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:863
L:15339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:888
L:15413 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:892
L:15447 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:894
L:15484 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:896
L:15541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:899
L:15558 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:900
L:15751 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:911
L:15822 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:915
```

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L:15992 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:925
L:16134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:933
L:16219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:938